MICROFLUIDIC ANALYTICAL SYSTEM WITH POSITION ELECTRODES

ABSTRACT OF THE DISCLOSURE

A microfluidic analytical system for monitoring an analyte (for example, glucose) in a liquid sample (e.g., ISF) includes an analysis module with at least one micro-channel for receiving and transporting a liquid sample, at least one analyte sensor for measuring an analyte in the liquid sample and at least one position electrode. The analyte sensor(s) and position electrode(s) are in operative communication with the micro-channel. The microfluidic system also includes a meter configured for measuring an electrical characteristic (such as impedance or resistance) of the position electrode(s). Moreover, the measured electrical characteristic is dependent on the position of the liquid sample in the micro-channel that is in operative communication with the position electrode for which an electrical characteristic is measured.